Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application:

Listing of Claims:

Claim 1. (currently amended) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a mature pokeweed antiviral protein ~~or part thereof~~, and, a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said mature pokeweed antiviral protein ~~or part thereof~~ is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells, with the proviso that the specific cells do not consist of pollen cells and wherein the necrotic effect induced results in disruption of nematode infection, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 2. (currently amended) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a mature PAP-S protein, ~~said coding sequence being that depicted in SEQ ID NO:3 or a sequence having the same functionality and being at least 70% homologous thereto, or said mature PAP-S protein having the amino acid sequence being that depicted in SEQ ID NO:4 or a sequence having the same functionality and being at least 80% homologous therewith,~~ said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said mature PAP-S protein ~~or part thereof~~ is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 3. (currently amended) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a PAP-S α protein, ~~said coding sequence being depicted in SEQ ID NO:5 or a sequence having the same functionality and being at least 70% homologous thereto, or said PAP-S α protein having the amino acid sequence being that depicted in SEQ ID NO:6 or a sequence having the same functionality and being at least 80% homologous therewith,~~ said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said PAP-S α protein ~~or part thereof~~ is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 4. (currently amended) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a PAP-S β protein, ~~said coding sequence being that depicted in SEQ ID NO:7 or a sequence having the same functionality and being at least 70% homologous therewith and or said PAP-S β protein having the amino acid sequence being that depicted in SEQ ID NO:8 or a sequence having the same functionality and being at least 80% homologous therewith,~~ said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said PAP-S β protein ~~or part thereof~~ is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claims 5-21. (canceled)

Claim 22. (currently amended) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural

development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of either a precursor PAP molecule or a precursor PAP molecule wherein the C-terminal region has been deleted ~~deletion thereof~~ and wherein said precursor PAP molecule or said precursor PAP molecule having the C-terminal region deleted inhibits ribosome activity and, a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said precursor PAP molecule or said precursor PAP molecule having the C-terminal region deleted ~~or a C-terminal deletion thereof~~ is expressed in specific cells of said plant, thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 23. (currently amended) The method of inducing a necrotic effect in specific cells of a plant according to Claim 22, wherein said coding sequence encodes ~~the~~ a Pro-PAP-S protein.

Claim 24. (currently amended) The method of inducing a necrotic effect in specific cells of a plant according to Claim ~~22~~ 23, wherein said coding sequence of the Pro-Pap-S is that depicted in SEQ ID NO:1 ~~or a sequence at least 70% homologous thereto and~~ or the Pro-Pap-S has the amino acid sequence ~~is~~ that is depicted in SEQ. ID. No.: 2 ~~or a sequence at least 80% homologous thereto~~.

Claims 25-27. (canceled)

Claim 28. (currently amended) The method of inducing a necrotic effect in specific cells of a plant according to any one of Claims 2, 3, 4, 22, ~~or~~ 24, 39, 40, 41, 42, 43, 44, or 45 wherein said promoter is induced in pollen cells, cells adjacent to pollen cells, anther cells, cells adjacent to anther cells, tapetum cells, cells adjacent to tapetum cells, ovule cells, cells adjacent to ovule cells, cells at a nematode feeding site, cells adjacent to a nematode feeding site cells, cells at an abscission zone, cells adjacent to an abscission zone, sepal cells, carpel cells, stamen cells, cells adjacent to sepal cells, cells adjacent to carpel cells, cells adjacent to stamen cells, trichome cells, cells adjacent to trichome cells, seed cells, or cells adjacent to seed cells.

Claim 29. (currently amended) A plant comprising specific cells in which a necrotic effect is induced by the method of any one of Claims 1, 2, 3, 4, 22, ~~or~~ 24, 39, 40, 41, 42, 43, 44, or 45.

Claim 30. (canceled)

Claim 31. (previously presented) A DNA isolate of a chimaeric gene of Claim 4.

Claim 32. (canceled)

Claim 33. (previously presented) The method of Claim 1, wherein said promoter is induced in cells adjacent to pollen cells, anther cells, cells adjacent to anther cells, tapetum cells, cells adjacent to tapetum cells, ovule cells, cells adjacent to ovule cells, cells at a nematode feeding site, cells adjacent to a nematode feeding site cells, cells at an abscission zone, cells adjacent to an abscission zone, sepal cells, carpel cells, stamen cells, cells adjacent to sepal cells, cells adjacent to carpel cells, cells adjacent to stamen cells, trichome cells, cells adjacent to trichome cells, seed cells, or cells adjacent to seed cells.

Claim 34. (previously presented) The method of Claim 1, wherein said coding sequence encodes a mature PAP-S protein, a pro-PAP-S protein, a PAP-S β protein, or PAP-S α protein.

Claim 35. (canceled)

Claim 36. (currently amended) A method of inducing a necrotic effect in specific cells of a plant comprising:

a) transforming plant cells with a chimaeric gene comprising a coding sequence of a mature pokeweed antiviral protein ~~or part thereof~~ and a promoter;

b) regenerating a plant from said transformed cells, and

c) exposing said plant to a pathogen or a chemical, or stimulating the natural development of said plant,

such that said mature pokeweed antiviral protein ~~or part thereof~~ is expressed in specific cells of said plant, thereby inducing a necrotic effect in said specific cells, wherein said promoter is induced in (i) said specific cells upon the natural development of said plant or (ii) said specific cells in response to the exposure of said plant to a pathogen or chemical and wherein

the necrotic effect induced results in disruption of nematode infection, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 37. (currently amended) A method of inducing a necrotic effect in specific cells of a plant comprising:

a) transforming plant cells with a chimaeric gene comprising either a coding sequence of a precursor PAP molecule or a precursor PAP molecule having the C terminal region deleted, and wherein said precursor PAP molecule or PAP molecule having the C terminal region deleted inhibits ribosome activity ~~or a C terminal deletion thereof~~ and a promoter;

b) regenerating a plant from said transformed cells, and

c) exposing said plant to a pathogen or a chemical, or stimulating the natural development of said plant,

such that said precursor PAP molecule ~~or a C terminal deletion thereof~~ or PAP molecule having the C terminal region deleted is expressed in specific cells of said plant, thereby inducing a necrotic effect in said specific cells, wherein said promoter is induced in (i) said specific cells upon the natural development of said plant or (ii) said specific cells in response to the exposure of said plant to a pathogen or chemical and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 38. (currently amended) The method of any of claims 1, 22, 23, 24, 36, ~~or~~ 37, 39, 40, 41, 42, 43, 44 or 45, wherein the pathogen is *Globodera* spp., *Heterodera* spp., *Meloidogyne* spp., or a virus.

Claim 39. (new) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a mature PAP-S protein, said coding sequence being that depicted in SEQ ID NO:3 or said mature PAP-S protein having the amino acid sequence being that depicted in SEQ ID NO:4, said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said mature PAP-S protein is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results

in disruption of nematode infection, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 40. (new) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a mature PAP-S protein, wherein said coding sequence has at least 70% homology to SEQ ID NO:3, or said mature PAP-S protein has an amino acid sequence that is at least 80% homologous to SEQ ID NO:4, and wherein said mature PAP-S protein inhibits ribosome activity, said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said mature PAP-S protein is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 41. (new) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a PAP-S α protein, said coding sequence being that depicted in SEQ ID NO:5 or said PAP-S α protein having the amino acid sequence being that depicted in SEQ ID NO:6, said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said PAP-S α protein is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 42. (new) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a PAP-S α protein, wherein said coding sequence has at least 70% homology to

SEQ ID NO:5, or said PAP-S α protein has an amino acid sequence that is at least 80% homologous to SEQ ID NO:6, and wherein said PAP-S α protein inhibits ribosome activity, said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said mature PAP-S α protein is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 43. (new) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a PAP-S β protein, said coding sequence being that depicted in SEQ ID NO:7 or said PAP-S β protein having the amino acid sequence being that depicted in SEQ ID NO:8, said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said PAP-S β protein is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 44. (new) A method of inducing a necrotic effect in specific cells of a plant comprising, exposing said plant to a pathogen or a chemical or stimulating the natural development of said plant, said plant comprising a chimaeric gene comprising, a coding sequence of a PAP-S β protein, wherein said coding sequence has at least 70% homology to SEQ ID NO:7, or said PAP-S β protein has an amino acid sequence that is at least 80% homologous to SEQ ID NO:8, and wherein said PAP-S β protein inhibits ribosome activity, said chimaeric gene further comprising a promoter which is induced in said specific cells in response to the exposure of said plant to said pathogen or chemical, or a promoter which is induced in said specific cells upon the natural development of said plant, such that said mature PAP-S β protein is expressed in specific cells of said plant thereby inducing a necrotic effect in said specific cells and wherein the necrotic effect induced results in disruption of

nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.

Claim 45. (new) The method of inducing a necrotic effect in specific cells of a plant according to Claim 24, wherein said coding sequence of the Pro-Pap-S has at least 70% homology with SEQ ID NO:1 or has an amino acid sequence that is at least 80% homologous with the amino acid sequence depicted in SEQ. ID. No.: 2 and wherein the Pro-Pap-S protein inhibits ribosome activity and wherein the necrotic effect induced results in disruption of nematode infection, sterility, changes in flower morphology, abscission, seed release, or prevention of trichome development.